

** To be placed under subdivision regulations*

Section 8 Design Standards of Definitive Plan

Section 8.09 Trees and Plantings

A. Purpose

The purpose of this bylaw is: to protect the critical identified forested areas in Granby from deforestation; to preserve trees in order to prevent erosion on disturbed areas and control stormwater drainage; and to protect the forested and rural character of Granby.

B. Tree Preservation

1. The landscape shall be preserved in its natural state insofar as practical by minimizing tree removal, except in connection with a property used for tree farming. If established areas are to be cleared, special attention shall be given to the planting of replacement trees. Land should not be clear-cut for the sole purpose of offering land for sale. Clear-cutting is defined as the removal of sixty-five (65%) of trees six (6) inches in diameter at breast height (DBH) or larger, on a single parcel.

2. Every effort shall be made through the design, layout, and construction of a subdivision to save as many existing trees as possible, especially those over twelve (12) inches DBH. Accordingly, the subdivider shall institute alternative site designs to assure the best chance of tree survival whenever the following criteria can not be adhered to. The following is a list of recommended measures for the protection of existing trees:

- a. There should be no operation of heavy equipment or storage of any materials under said tree within its natural drip line.
- b. Wherever possible, no grading or filling should be done within the drip line.
- c. Supplemental irrigation should be provided to all trees as needed during the summer months to ensure healthy maintenance.
- d. No black top paving or vehicle parking should be located under evergreen trees.
- e. No more than twenty (20) percent of the area under any deciduous trees natural drop line may be paved.
- f. All drainage from paved areas should be directed away from root zones.

3. On wooded lots, subdividers are required to submit a Tree Preservation Plan. The Plan must be prepared by a registered landscape architect or forester. The Tree Preservation Plan must include a scaled Site Plan including the following information:

- a. A tree inventory indicating the size, species, location, and condition of all significant trees and clumps of not significant trees within the limits of the proposed activity; also location of existing and proposed structures, improvements, utilities, and existing and proposed contours. Significant trees are defined as any living, healthy tree measuring 8 inches DBH or greater.
- b. Specific protection techniques and disease control, if applicable, that will be utilized to minimize disturbance to all trees remaining on site.
- c. A reforestation plan indicating size, species, location, and planting specifications of all street trees, yard trees, and replacement trees.
 - i. The reforestation plan shall utilize a variety of tree species with emphasis on native species when possible.
 - ii. Replacement trees shall be a minimum of 4 inch DBH if deciduous, or six (6) feet in height if coniferous.

C. Street Trees

1. The subdivider is required to plant suitable broad-leaved deciduous shade trees along all streets. Said trees shall be located within the street right-of-way unless the Planning Board has approved otherwise. All trees shall be the equivalent of well rooted nursery grown stock, free of injury, harmful insects, and diseases. They shall be well branched and the branching structure should be sound and not interfere with traffic visibility. In certain cases, where the subdivider's Tree Preservation Plan demonstrates, to the satisfaction of the Planning Board, that suitable trees will be retained within the right-of-way, the Board may waive a portion of all the required street trees.

2. The subdivider shall install street trees as follows:

- a. The distance between trees shall not exceed 30 feet along the way.
- b. All trees to be planted shall have a minimum height of 8-10 feet at planting and shall be of at least 4 inches DBH.
- c. The species and variety of the trees to be planted shall be species native to New England and selected and approved by the Tree Warden.
- d. No evergreen trees such as pine, fir, spruce or hemlock shall be planted as public shade trees along the way.

e. No trees or shrubs shall be planted at any corner or intersection where they could become a traffic hazard by obstructing vision or preventing safe vehicular travel.

f. All cut bankings that tend to wash or erode shall be planted with a low growing evergreen shrub such as Creeping Juniper (*Juniperus horizontalis*) and seeded with a deep rooted perennial grass or groundcover, such as Bearberry (*Archtostaphylos uva-ursa*) to prevent erosion.

g. All trees should be planted on one-half (1/2) cubic yard of loam mulched with four (4) inches of chips and shall be properly wrapped and guyed in a manner to ensure their survival.

h. In a subdivision, the subdivider will be liable for all planted trees as to their erectness and good health for two calendar years after planting as determined by the Tree Warden.

D. Tree Replacement

1. The subdivider shall provide replacement trees on each lot at the ratio of at least one tree for each 2,000 square-feet of open area on such lot. Such open area shall be calculated as the total area of the lot less the proposed impervious area on the lot as set forth in the hydraulic calculations submitted with the Definitive Subdivision Plan. Any trees left in good growing condition, as judged by the Tree Warden, on the site may be counted toward this requirement.

2. Selection of replacement trees in regard to their number, size and species, shall be determined by the Planning Board upon recommendation of the Tree Warden, on the basis of an analysis of tree canopy conditions, soil conditions, and other relevant factors.

3. When possible, trees shall be species native to New England. Please see “List of Recommended Trees” for preferred tree species.

4. Use of exotic plants, such as Norway Maple (*Acer platanoides*), Crimson King Norway Maple (*Acer platanoides* ‘Crimson King’), Ailanthus (*Ailanthus altissima*), Amur Corktree (*Phellodendron amurense*), Rhamnus cathartica (Common Buckthorn) and *Fragula alnus* (Glossy Buckthorn) is prohibited.

E. Remediation

1. Any tree shown to be saved on the above mentioned Tree Preservation Plan which, however, is removed or whose survival is irredeemably jeopardized in violation of these conditions shall be replaced in a manner to be determined solely by the Planning Board on advice of the Tree Warden in accordance with the following guidelines:

- a. Each such removed or jeopardized tree of less than 6-inch DBH shall be replaced in kind by a tree of not less than 4-inch DBH in as close to the original location as possible,
 - b. Each such removed or jeopardized tree of a caliper between 6 inches and 12 inches DBH shall be replaced in kind by two trees of not less than 4 inches DBH in as close to the original location as possible,
 - c. Each such removed or jeopardized tree of greater than 12-inch DBH shall be replaced in kind by two trees of not less than 6-inch DBH at locations determined by the Planning Board with advice of the Tree Warden.
2. Failure by the subdivider to comply with these conditions expeditiously may result in the Planning Board rescinding its approval of the Definitive Subdivision Plans in accordance with Section 5.07 and cause the revocation of any or all construction issued in connection with the subdivision; in addition the Planning Board reserves the right to withhold from bond reductions or releases in connection with the subdivision sufficient sums to cover the Town's costs of remediation.

F. Enforcement

1. The Tree Warden or any Planning Board member, or Board designee shall conduct periodic inspections of the site during land clearance and construction in order to ensure compliance with these conditions. Should the Conservation Administrator, Building Inspector, Town Engineer, Police Officer, or any other town official observe violations or possible violations of these conditions, such official shall immediately report same to the Tree Warden or the Town Planner.

LIST OF RECOMMENDED TREES

(An asterisk * denotes a species native to North America. These should in general be preferred to non-native species, as they contribute to the local ecology in ways that exotic species can not.)

Scientific Name	Common Name	Height	Notes
<i>Acer campestre</i>	Hedge Maple	25'-40'	Handsome street tree
<i>Acer ginnala</i>	Amur Maple	15'-20'	Good fall color
<i>Acer griseum</i>	Paperbark Maple	25'-35'	Interesting Bark
<i>Acer rubrum</i> *	Red Maple	50'-75'	Tolerates wet sites
<i>Acer saccharum</i> *	Sugar Maple	60'-80'	Salt intolerant, vivid fall colors
<i>Amelanchier laevis</i> *	Serviceberry	15'-30'	4-season interest, edible berries
<i>Betula nigra</i> *	River Birch	40'-75'	Cultivars
<i>Catalpa speciosa</i> *	Catalpa	50'-60'	Large leaves, flowers & pods
<i>Celtis occidentalis</i> *	Hackberry	50'-60'	Attracts birds, good street tree
<i>Ceridiphyllum japonicum</i>	Katsura	40'-60'	Prefers moist ground
<i>Cercis Canadensis</i> *	Redbud	15'-25'	Tolerates shade, strong spring color
<i>Cladrastis kentukea</i> *	Yellowwood	30'-50'	Spreading and low branching, good in lawns
<i>Cornus alternifolia</i> *	Pagoda Dogwood	20'	Underused but desirable native
<i>Cornus kousa</i>	Kousa Dogwood	15'-30'	Wider than tall
<i>Corylus colurna</i>	Turkish Filbert	75'	Tolerates drought
<i>Crataegus phaenopyrum</i> *	Washington Hawthorn	25'	Fall berries attract birds
<i>Fraxinus americana</i> *	White Ash	50'-80'	Grows wide as well as tall
<i>Fraxinus pennsylvanica</i> *	Green Ash	50'-60'	Fast growing, tough
<i>Ginko biloba</i>	Ginko	45'-55'	Plant only males
<i>Gleditsia tricanthos</i> * (thornless)	Honeylocust	40'-80'	Gives filtered shade, fall gold
<i>Gymnocladus dioicus</i> *	Kentucky Coffeetree	50'-70'	Male preferably, an underused tree
<i>Liquidambar styraciflua</i> *	Sweet Gum	60'-75'	Fall color, star-shaped leaf
<i>Liriodendron tulipifera</i> *	Tuliptree	70'-90'	Tallest native tree
<i>Maackia amurensis</i>	Amur Maackia	20'-30'	Good street tree, underused

<i>Machura pomifera</i> *	Osage Orange	60'	Interesting orange bark, large fruits (female only)
<i>Magnolia stellata</i> , esp. 'Centennial'	Star Magnolia	15'-25'	Needs moisture, flexible usage even on street
<i>Malus</i> spp.	Flowering Crabapples	20'-25'	Many cultivars
<i>Nyssa sylvatica</i> *	Tupelo, Gum Tree	40'-70'	Good in groves, moisture
<i>Ostrya virginiana</i>	American Hophornbeam	25'-40'	Unique capsules, handsome bark
<i>Oxydendrum arboreum</i> *	Sourwood	25'	4-season interest
<i>Platanus x acerifolia</i>	London Planetree	70'-100'	Interesting bark
<i>Platanus occidentalis</i> *	American Sycamore	70'-100'	Interesting bark
<i>Quercus</i> , spp. *	Oak species	60'-80'	The National Tree, grows very well
<i>Robinia pseudoacacia</i> *	Black Locust	40'-50'	Tolerates very poor soil
<i>Sophora japonica</i>	Japanese Scholartree	50'-70'	Mid-summer flowers
<i>Tilia americana</i> *	Basswood	60'-80'	Fragrant Blossoms
<i>Tilia cordata</i> 'Greenspire'	Littleleaf Linden	40'-60'	Neat Shape
<i>Ulmus americana</i> 'Princeton' *	American Elm	60'-80'	Disease resistant
<i>Ulmus parvifolia</i>	Lacebark Elm	40'-50'	Disease resistant, beautiful bark
<i>Zelcova serrata</i>	Zelcova	60'-70'	Hardy

UNDESIRABLE TREE SPECIES

If you have these trees, consider removing them.

<i>Acer platanoides</i>	Norway Maple		Invasive
<i>Ailanthus altissima</i>	Tree of Heaven		Invasive
<i>Rhamnus cathartica</i> , and <i>Fragula alnus</i> (formally known as <i>Rhamnus frangula</i>)	Common Buckthorn Glossy Buckthorn		Both invasive